



## Preliminary Information

### PIP5829 MIL Illuminated with DTC P0299

#### Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
BUICK	Encore GX	2019 - 2022	All	All	1.2L (LIH)	All
CHEVROLET	Trailblazer	2020 - 2022	All	All	1.2L (LIH)	All

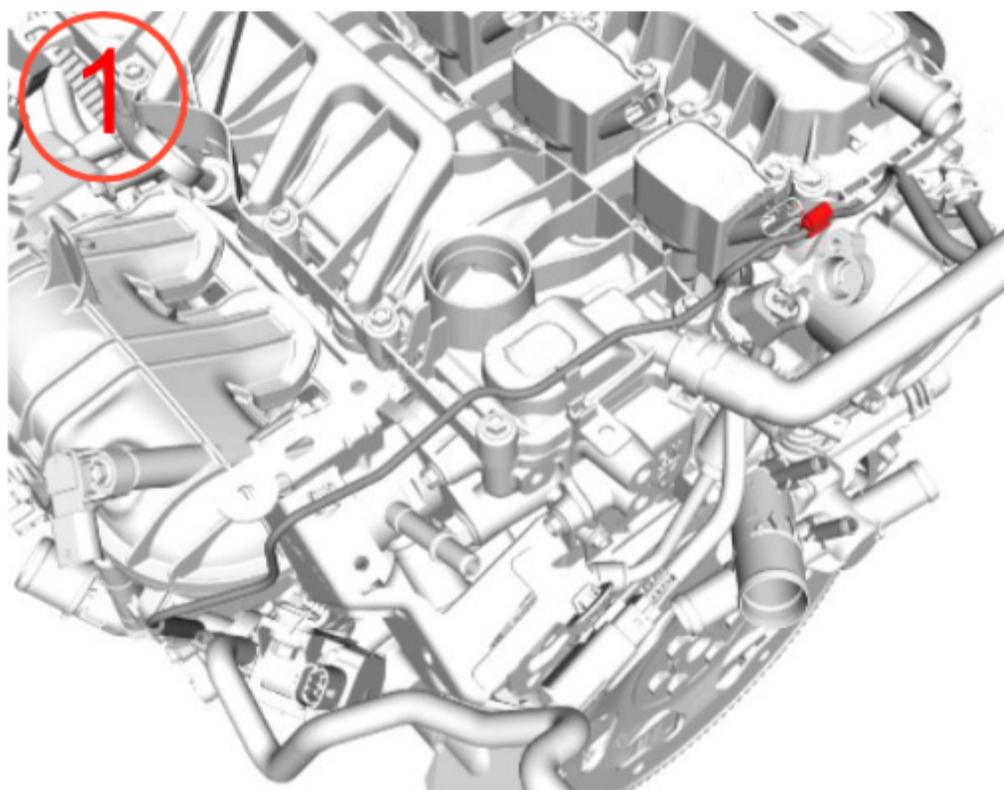
Involved Region or Country	North America
Condition	MIL illuminated with DTC P0299
Cause	Potential turbocharger wastegate linkage wear

#### Correction:

Some customers may comment that the MIL light is illuminated. A P0299 may be stored Current or in history.

First perform the following testing.

Disconnect the Turbocharger Wastegate Solenoid Vacuum Supply Hose (shown in fig 1 below) from the Turbocharger Wastegate Solenoid Valve.



Connect the EN-23738-A Vacuum Pump to the Turbocharger Wastegate Solenoid Vacuum Supply Hose.

Engine » Idling.

Verify the tool reading: EN-23738-A Vacuum Pump = -50 kPa (-0.5 bar, 15 in Hg).

If the desired pressure/vacuum cannot be achieved or does not hold steady.

Ignition/Vehicle » Off.

Test or replace the component: Vacuum Pump Assembly / related hoses.

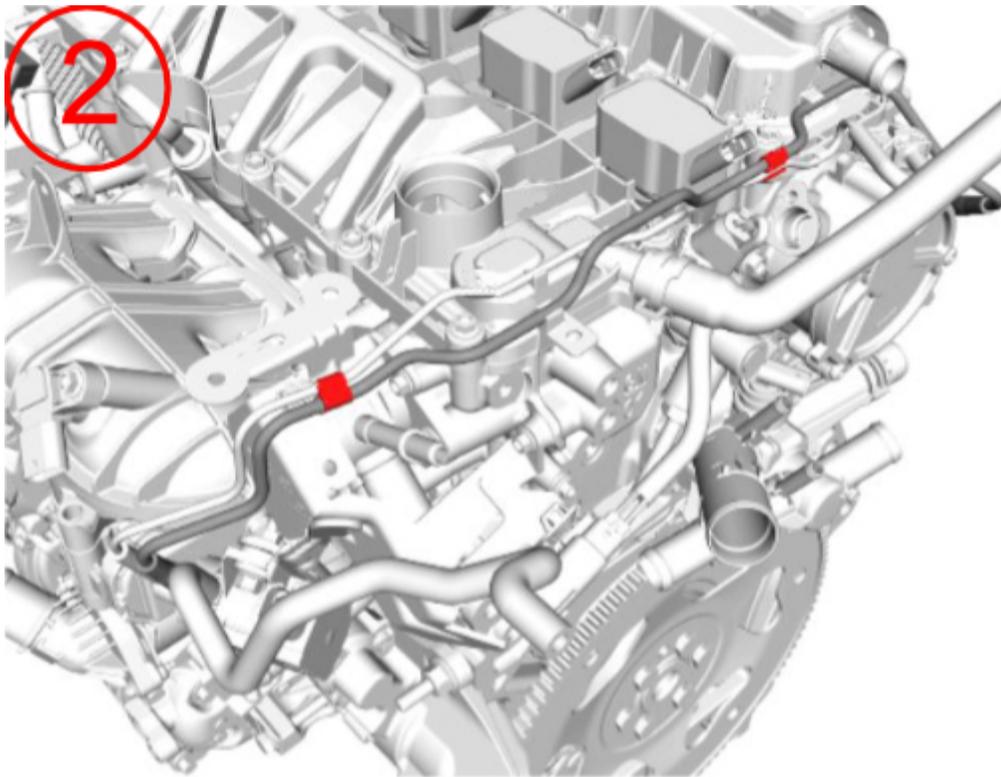
If the desired pressure/vacuum can be achieved and holds steady.

Engine » Off.

Reconnect the Turbocharger Wastegate Vacuum Supply Hose to the Turbocharger Wastegate Solenoid Valve.

Disconnect the Turbocharger Wastegate Solenoid Actuator Supply Hose (**shown in fig 2 below**) from the Turbocharger Wastegate Solenoid Valve.

Connect the EN-23738-A Vacuum Pump to the Turbocharger Wastegate Solenoid Valve Actuator supply port.



Engine » Idling.

Verify the tool reading: EN-23738-A Vacuum Pump = Less than  $-17$  kPa( $-0.17$  bar, 5 in Hg).

If  $-17$  kPa( $-0.17$  bar, 5 in Hg) or greater.

Test or replace the component: Q42 Turbocharger Wastegate Solenoid Valve.

If less than  $-17$  kPa( $-0.17$  bar, 5 in Hg).

Engine Speed @ Wide Open Throttle — For 2 s.

Verify the tool reading: EN-23738-A Vacuum Pump = Greater than  $-50$  kPa( $-0.5$  bar, 15 in Hg).

If less than  $-50$  kPa( $-0.5$  bar, 15 in Hg).

Test or replace the component: Q42 Turbocharger Wastegate Solenoid Valve.

If Greater than  $-50$  kPa( $-0.5$  bar, 15 in Hg).

Remove the Turbocharger from the vehicle and inspect the Turbocharger Wastegate linkage for excessive wear / play. (Compare to replacement Turbocharger if necessary).

If found, replace the Turbocharger, and perform: Intake System Learned Values Reset.

### Warranty Information

**For vehicles repaired under the Emission coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information**

Labor Operation	Description	Labor Time
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4023250	Turbocharger Wastegate Regulator Solenoid Valve Replacement	Use Published Labor Time
4088328*	Turbocharger Replacement	3.3 Hrs.
*This is a unique Labor Operation for Bulletin use only.		

### Version History

Version	1
Modified	11/22/2021 - Created on.



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